PERMIT TO CONSTRUCT/OPERATE EVALUATION (FLEXOGRAPHIC PRESS)

Applicant's Name	**GEORGIA-PACIFIC CORRUGATED LLC**
Company I.D.	**153033**
Mailing Address	**6300 REGIO AVE., BUENA PARK, CA 90620**
Equipment Address	**6300 REGIO AVE., BUENA PARK, CA 90620**

EQUIPMENT DESCRIPTION

APPLICATION NO. 498531 (New Construction, D55)

FLEXOGRAPHIC PRINTING PRESS, NO. 125, WARD MACHINERY, MODEL NO. 15000 ROTARY DIE-CUTTER, 3 COLOR, 113" L. X 66" W. MAXIMUM SHEET SIZE, WITH A ROTARY DIE-CUTTER,

APPLICATION NO. 498533 (Title V/RECLAIM Revision)

HISTORY

Georgia-Pacific Corrugated LLC submitted the above permit application as class I application to construct/operate a new flexographic printing press. The facility has already submitted change of operator applications for all the permitted equipment operated by the previous operator, Georgia Pacific Corp. (I.D. 11016). This facility includes flexographic printing presses, laminators, waxer-cascader, storage silos, hoppers, waste water treatment plant, etc.

The applicant is a cardboard stock and card-board box manufacturer. They have two corrugator laminators that produce cardboard from paper stock and starch adhesive. The manufacturing involves printing, adhesive application, wax application, cutting, etc. The boxes used in the food industry require moisture resistance property. This is achieved by application of a thin wax film on the finished printed surface. The applicant already operates similar flexographic presses at this location. The above referenced equipment is added to the facility to have additional flexibility in the production schedule.

A facility-wide VOC emission limit of 2700 lbs/month (90 lbs/day), excluding emissions from the waxer-coater, has already been established for this facility. The company did not request any facility wide VOC emission increase from this project. The above press will operate under this monthly facility cap. Hence, there will not be any net VOC emission increase under this project.

The facility has already requested and obtained a facility-wide HAP caps (10 tons/yr for single HAP and 25 tons/yr for combined HAPs; Condition F2.2) so that they can be exempt from the NESHAP requirements under 40CFR63 Subpart DDDD.

The District database shows that the applicant has not received any odor nuisance or visible emission complaints from the public in the last two years. The database also indicated that the applicant has not received any Notices to Comply or Notice of Violations from the District inspectors.

There are no schools located within 1000 feet from the property-line. However a public notice will be required for this project as the maximum potential VOC emissions from this equipment will be more than the 30 lbs/day threshold limit. Also, this project does not result in any VOC emission increases from the previously established facility-wide cap, thus no offsets are required for this project.

Georgia Pacific Corrugated LLC is a RECLAIM/Title V facility. This facility recently changed ownership from Georgia Pacific (ID 011016) and a Title V permit was issued on June 9, 2009 to the new operator Georgia-Pacific Corrugated LLC. The proposed permit revision is considered as a "de minimis significant permit revision" to the renewed Title V/RECLAIM permit issued to the previous operator on 6/2/2005. The facility permit is in the RECLAIM facility permit program format.

PROCESS DESCRIPTION

Georgia-Pacific Corrugated LLC is a large sized commercial corrugated board box manufacturer, where printing is also performed on the boxes per customer specification. Corrugated board consists of a fluted sheet (called the corrugated medium) glued to one or more liners. The resulting combination of columns and arches produce a product much stronger than the paperboard from which it is made. Corrugated board is primarily used to form boxes for shipping.

In the typical flexographic printing sequence, the substrate is fed into the press from a roll. The image is printed as substrate is pulled through a series of stations, or print units. Each print unit is printing a single color. The types of flexographic printing employ a plate cylinder, a metering cylinder known as the anilox roll that applies ink to the plate, and an ink pan. Some presses use a third roller as a fountain roller and, in some cases, a doctor blade for improved ink distribution.

Flexographic presses are commonly utilized to print images on the corrugated sheet stock. The printed sheet stock is then sent to the creaser/slotter section to be trimmed and slotted. Following trimming, the printed sheet stock is directed to the folder gluer section where it is folded, glued, assembled and subsequently prepared for shipment off-site.

The facility is using very low VOC water based flexo inks with a VOC content of about 0.25 lbs/gal or less with rare exceptions. The flexographic inks used at this facility are supplied by Advanced Color Systems, Inc. The facility also uses inks designated as HQ series inks (PMS/GCMI colors and whites). The HQ series inks have a VOC content of less than 1.5 lbs/gal less water and exempt solvents. These PMS/GCMI inks are used in special jobs requested by the customers. A permit condition for BACT shall be imposed limiting the VOC content of all inks to less than 0.5 lbs/gal with the exception of PMS/GCMI inks which will be limited to 1.5 lbs/gal. This facility has similar flexographic printing presses with the same ink VOC content permit conditions. The inks contain a small quantity of Rule 1401 compounds.

The facility uses "Americlean Blue" and "Ecosafe Flexographic Ink Cleaner" to clean the flexographic printing presses. Both of these materials contain no VOCs.

OPERATING HOURS

Average: 24 hr/day, 7 day/week, 52 weeks/year
Maximum: 24 hr/day, 7 day/week, 52 weeks/year

EMISSION CALCULATIONS

There are VOC emissions from this equipment. No particulate emissions are expected from the operation of a flexographic printing operation. The VOC emission sources are primarily hydrocarbons in the water based inks. The applicant provided MSDS copies of the inks. The maximum VOC content will be used for these calculations.

There are no emissions from the clean-up material, as no VOC containing materials are used in this equipment

Maximum usage of inks used in a day will be about 135 gallons. The average usage of ink in a day will be about 60 gallons.

Flexographic Press - Air Dry								
498531	maximum	normal				ink/varnish	fountain	wash
hr/dy	24	24		Emission factor		100%	0%	100%
dy/wk	7	7						
wk/yr	52	52		Control efficiency		0%		
	VOC	ave	max		ave VOC	max VOC		
	(lb/gal)	(gal/dy)	(gal/dy)		(lb/dy)	(lb/dy)		
based Flexo Ink	0.25	40	90		10.00	22.50		
PMS Flexo Ink	1.5	20	45		30.00	67.50		
	0	0	0		0.00	0.00		
	0	0	0		0.00	0.00		
	0	0	0		0.00	0.00		
	0	0	0		0.00	0.00		
	0	0	0		0.00	0.00		
	0	0	0		0.00	0.00		
	0	0	0		0.00	0.00		
Ecosafe Wash	0	5	10		0.00	0.00		
Americlean Blue	0	2	4		0.00	0.00		
	0	0	0		0.00	0.00		
	0	0	0		0.00	0.00		
_	0	0	0		0.00	0.00		
	NSR--->>>	max	max	30-day		AEIS--->>>	ave	ave
		(lb/hr)	(lb/dy)	(lb/dy)			(lb/hr)	(lb/yr)
ROG (R1)		3.75	90.00	NA			1.67	NA
ROG (R2)		3.75	90.00	90.00			1.67	14560.00

RULE 1401 EMISSIONS

The inks contain copper compounds and sodium hydroxide which are not going to be emitted in the ink application method. Inks contain volatile ammonium hydroxide, which is a R1401 air toxic. Styrene for acrylic is also volatile material but it is not a R1401 toxic air contaminant.

Compounds	Content (lbs/gal) A	Max. Gallons used/day B	No. of Days In a year Possible max. C	Lbs/year A X B X C D	Lbs/hr =A X B / 24	Rule 1401 Tier 1 level at 100 meters
Ammonia in Inks	0.3	135	365	14783	1.68	8.57 lbs/hr, 51700 lbs/yr

The ammonia emissions are well below the Tier 1 levels for a 100 meter receptor. The evaluation of the short term (acute) and long term (chronic) health impacts associated with the maximum potential emissions is in the attached spreadsheets. Using worst case conditions, the evaluation shows that the chronic and acute health risks are both well below toxic thresholds (below a Hazard Index of 1). Thus, this equipment is expected to comply with the Rule 1401 requirements.

RULES/REGULATION EVALUATION

¤ ***RULE 212, PUBLIC NOTIFICATION***

v***SECTION 212(c)(1):***

This section requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school. This source is not located within 1,000 feet from the outer boundary of a school. Therefore, public notice will not be required by this section.

v ***SECTION 212(c)(2):***

This section requires a public notice for all new or modified facilities which have on-site emission increases exceeding any of the daily maximums as specified in subdivision (g). This project will not cause a net increase in the potential VOC emissions from this facility since the facility-wide VOC emission limit is not changing. Therefore, this application will not be subject to this section.

LB/DAY	CO	NOX	PM_{10}	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	0	0	0	0	0	0

v ***SECTION 212(c)(3):***

Please, see Rule 1401 evaluation section. Public notice is not required by this section. There are no carcinogenic Rule 1401 air toxic compounds in the materials to be used in this equipment.

v ***SECTION 212(g):***

This section requires a public notice for all new or modified sources which undergo construction or modifications resulting an emissions increase exceeding any of the daily maximum specified in the table below. As shown in the following table, the emission increases are above the daily maximum limits specified by Rule 212(g). Therefore, public notice will be required by this section.

LB/DAY	CO	NOX	PM_{10}	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	0	0	0	90	0	0

¤ ***RULES 401 & 402, VISIBLE EMISSIONS & NUISANCE***

AQMD database has no records of any visible emissions or nuisance complaints against this company in the last two years. Compliance is expected.

¤ ***RULE 1130, GRAPHIC ARTS***

v ***SECTION (C)(1), VOC CONTENT OF INKS***

The facility uses all water based flexographic inks with VOCs (maximum 1.5 lbs/gallon coating VOC less water and exempt compounds) below the rule limit for porous substrates (225 gr/liter or 1.875 lbs/gal). Thus, compliance with the rule requirements is expected.

¤ ***RULE 1171, SOLVENT CLEANING OPERATIONS***

According to MSDS copies provided by the applicant, clean-up materials to be used in this press contains no VOCs. Thus, compliance with these rule requirements is expected.

REGULATION XIII

¤ ***RULE 1303(a), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)***

(a) VOC EMISSIONS

For flexographic printing operations, the ink VOC will not exceed 0.5 lbs/gal coating, less water and exempt solvents for all inks except ink designated as HQ series inks. The HQ series inks shall have VOC less than 1.5 lbs/gal coating, less water and exempt solvents. Permit conditions will be imposed to limit PMS/GCMI inks to 1.5 lb/gal coating or less, and all other inks to 0.5 lbs/gal or less. This complies with the BACT requirement for flexographic inks. The materials used for the clean-up do not contain any VOCs.

¤ ***RULE 1303(b)(1), MODELING***

No detailed modeling analysis is required for VOC emissions only.

¤ ***RULE 1303 (b)(2), EMISSION OFFSETS***

Emission offsets are not required for this project as the applicant has not requested any VOC emission increases in the facility-wide VOC emission cap under this project.

¤ ***RULE 1401, NEW SOURCE REVIEW OF CARCINOGENIC AIR CONTAMINANTS***

The inks contain ammonia, which is identified as an acute and chronic TAC. As discussed above in the emission calculations, this equipment is expected to comply with these requirements.

REGULATION XXX

This facility is in the RECLAIM program. The proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or hazardous air pollutants (HAPs), and a "minor permit revision" for RECLAIM pollutants to the RECLAIM/Title V permit for this facility.

Non-RECLAIM Pollutants or HAPs

Rule 3000(b)(6) defines a "de minimis significant permit revision" as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or HAPs from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NOx*	40
PM_{10}	30
SOx*	60
CO	220

* Not applicable if this is a RECLAIM pollutant

To determine if a project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the initial Title V permit shall be accumulated and compared to the above threshold levels. This proposed project is the 1st permit revision to the Title V permit issued to this new operator on June 9, 2009. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued to the previous operator on 6/2/2005

Revision	HAP	VOC	NOx*	PM_{10}	SOx	CO
Permit Revision No. 1. Add Device No. D23. Issue P/C (issued 11/12/2006).	0	0	0	0	0	0
Change of operator from Georgia-Pacific (ID 11016) to Georgia-Pacific Corrugated LLC (ID 153033) – Rev 0 issued 6/12/2009).	0	0	0	0	0	0
1st Permit Revision: Add new flexographic press (A/N 498531). Device no. D55	0	0	0	0	0	0
Maximum Daily Threshold	30	30	40	30	60	220

* RECLAIM pollutant, not subject to emission accumulation requirements

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs.

RECLAIM Pollutants

Rule 3000(b)(12)(A)(v) defines a "minor permit revision" as any Title V permit revision that does not result in an emission increase of RECLAIM pollutants over the facility starting Allocation plus nontradeable Allocations, or higher Allocation amount which has previously undergone a significant permit revision process.

Since NOx is a RECLAIM pollutant for this facility, a separate analysis shall be made to determine if the proposed permit revision is considered a "minor permit revision" for RECLAIM pollutants. Section B of the Title V permit shows that this facility's NOx starting Allocation plus the non-tradable Allocation is 3,000 pounds. The proposed project is expected to result in no increase in NOx emissions from this permit revision. As a result, this proposed project is considered as a "minor permit revision" for RECLAIM pollutants.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or hazardous air pollutants (HAPs), and a "minor permit revision" for RECLAIM pollutants, it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V/RECLAIM permit will be issued to this facility.